Charging Connectors Compatible with the CCS Type-1 EV Fast Charging Standard

KW11 Series Connector Harness

CONNECTOR
MB-0387-2
Feb. 2024

RoHS Compliant

Powerlance branded EV charging connectors combine durability and high-quality performance to provide the industry's most dependable solutions.

The KW11 is an Electric Vehicle (EV) charging connector compatible with the CCS (Combined Charging System) Type-1 electric vehicle fast charging standard and supports a rated charging current of 150A and 200A. The product is UL recognized as it has been tested to this standard and meets the associated rigorous product safety standards.

With the spread of EVs, it is expected that quick charger network usage will increase in various regions globally. The KW11 Series meets specifications that support requirements in the EV charging market in North America. The handle has a design that makes it easy to grip even while wearing thick gloves in extremely cold areas. The latch that secures the EV charging connector to EV inlets is reinforced with a metal core to prevent it from breaking, a common problem during field operation.

In addition, as a safety precaution, a double insulation structure has been adopted to protect the live components inside the connector from water ingress, so short circuit can be prevented even if the exterior is breached or damaged in any way by unexpected accidents.

Features

- Compatible with the fast-charging standard CCS Type-1
- UL and cUL recognized products
- The strength of the latch is enhanced with a metal core reinforcement
- Safety design with waterproof protection of live parts inside the connector
- Easy-to-grip handle design even when wearing thick gloves
- Highly reliable design using materials proven to be resilient against harsh environmental conditions

Application

Fast charger for Electric Vehicles (CCS Type-1 compatible, charging mode: Mode 4)

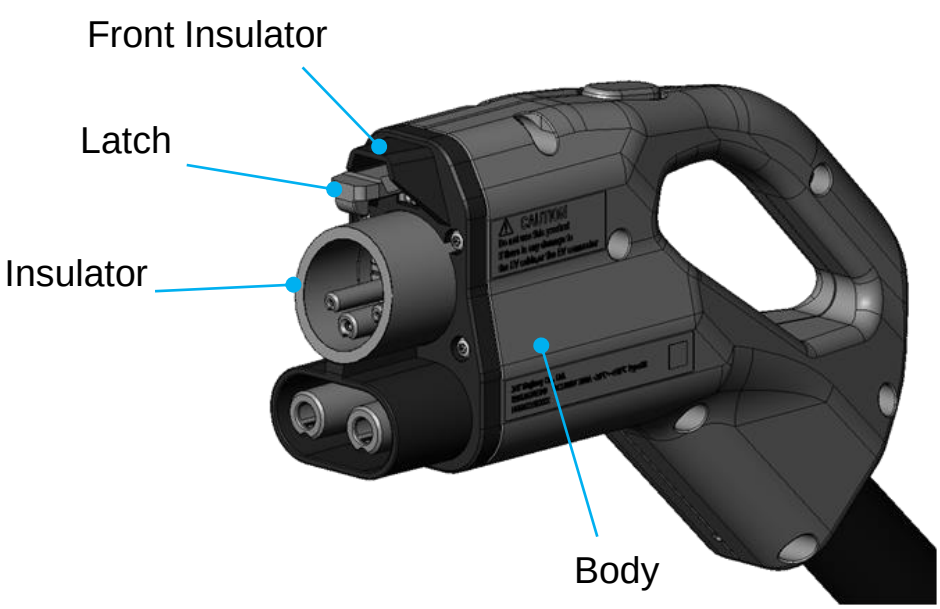
General Specifications

Number of Contacts	Power: 2 pos Protective Earth : 1 pos Signal: 2 pos
Rated Current	Power: 150A / 200A[1], Signal: 2A
Rated Voltage	Power: DC1000V, Signal: AC30V
Insulation Resistance	5 MΩ min. (Apply DC1000V between adjacent contacts)
Dielectric Withstanding Voltage	AC 3,000V / 1 minute
Durability	10,000 cycles
Insertion Force	75N max.
Operating Temperature Range	-30°C to +50°C

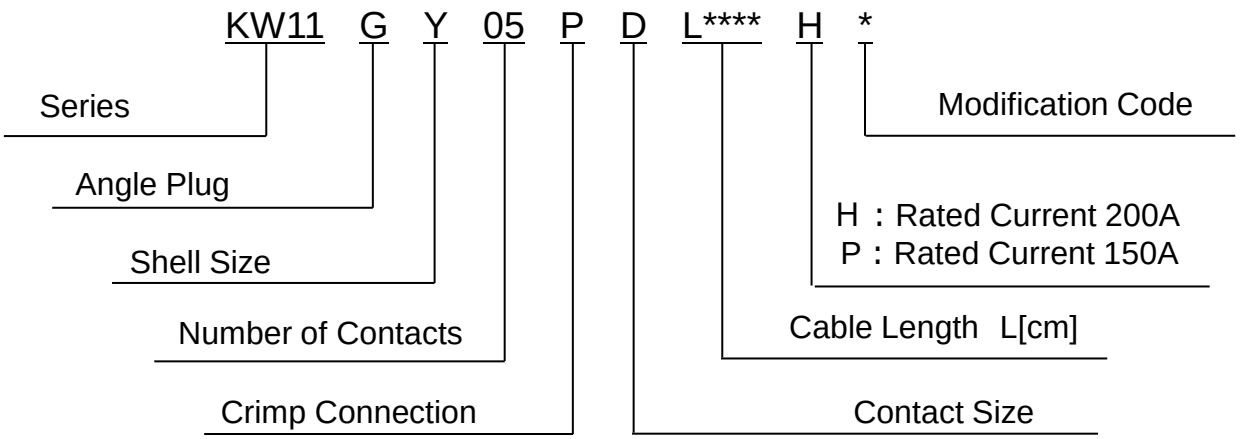
[1] Products with rated currents of 150A and 200A are available.

Materials and Finishes

Component	Material	Finishing
Front Insulator	Environment Resistant Resin	-
Insulator	Environment Resistant Resin	-
Body	Environment Resistant Resin	-
Latch	Environment Resistant Resin + Stainless Steel	-



Ordering Information



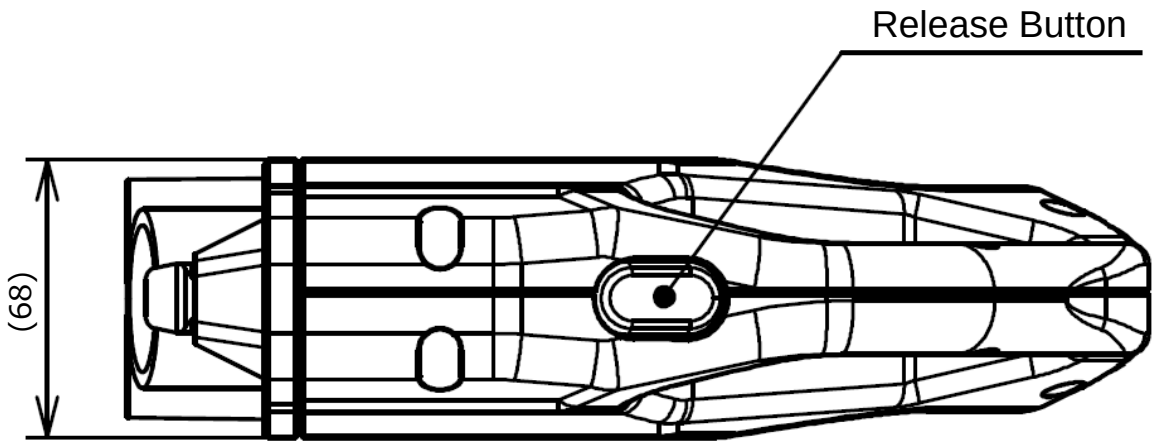
Part Number List

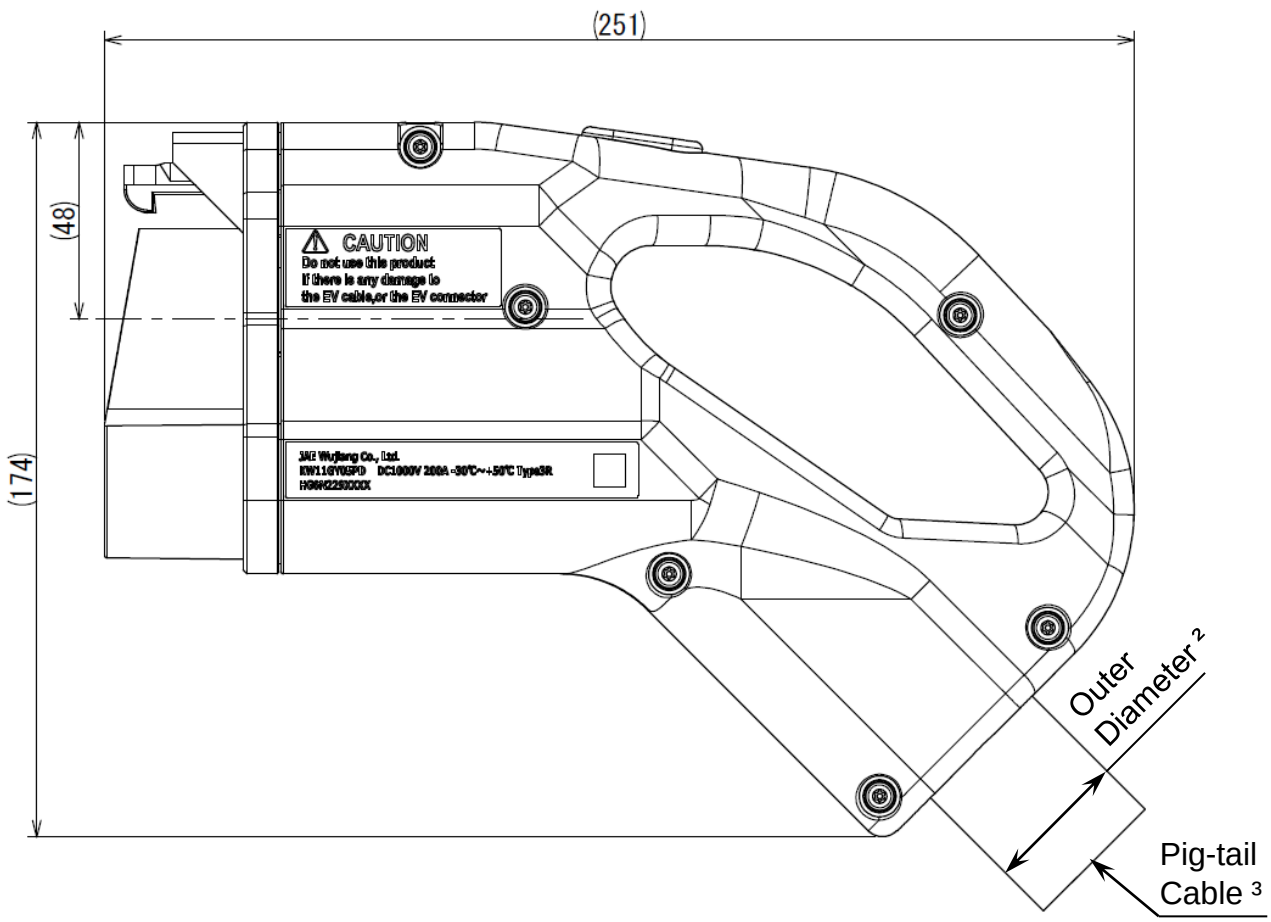
Part Number	Drawing No.	Cable Length	Specifications	Handling Instructions
KW11GY05PDL0300HG	SJ125638	3.0m	JACS-40243-01	JAHL-40243
KW11GY05PDL0350HG		3.5m		
KW11GY05PDL0400HG		4.0m		
KW11GY05PDL0450HG		4.5m		
KW11GY05PDL0500HG		5.0m		
KW11GY05PDL0550HG		5.5m		
KW11GY05PDL0600HG		6.0m		
KW11GY05PDL0650HG		6.5m		
KW11GY05PDL0700HG		7.0m		
KW11GY05PDL0750HG		7.5m		
KW11GY05PDL0800HG		8.0m		
KW11GY05PDL0850HG		8.5m		
KW11GY05PDL0900HG		9.0m		

Part Number List

Part Number	Drawing No.	Cable Length	Specifications	Handling Instructions
KW11GY05PDL0300PG	SJ125639	3.0m	JACS-40243-02	JAHL-40243
KW11GY05PDL0350PG		3.5m		
KW11GY05PDL0400PG		4.0m		
KW11GY05PDL0450PG		4.5m		
KW11GY05PDL0500PG		5.0m		
KW11GY05PDL0550PG		5.5m		
KW11GY05PDL0600PG		6.0m		
KW11GY05PDL0650PG		6.5m		
KW11GY05PDL0700PG		7.0m		
KW11GY05PDL0750PG		7.5m		
KW11GY05PDL0800PG		8.0m		
KW11GY05PDL0850PG		8.5m		
KW11GY05PDL0900PG		9.0m		

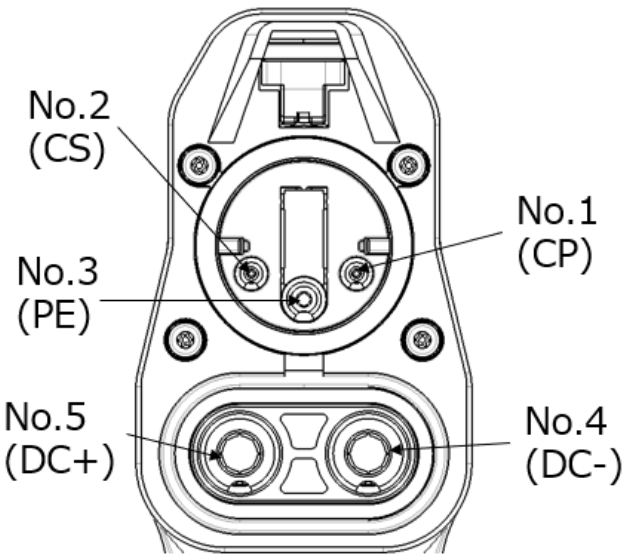
Outer Dimensions

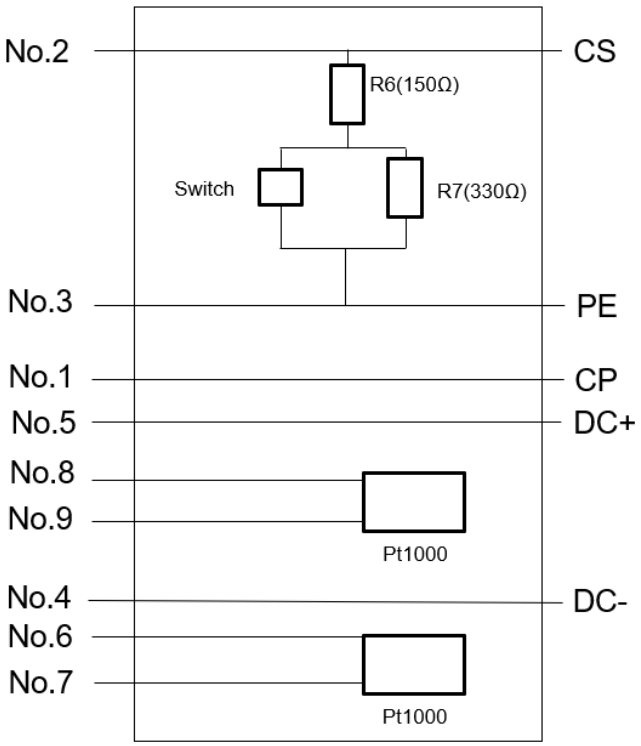




[2] KW11GY05PDL****HG:Φ35, KW11GY05PDL****PG:Φ31
[3] The cable is pigtailed at the opposing end of the connector

Contact Arrangement





Arrangements	Terminal Number	Wire Outer Color	Wire Size
CP	1	Blue	AWG18
CS	2	White	AWG18
PE	3	Green & Yellow	AWG6 (KW11GY05PDL****HG)
			AWG5 (KW11GY05PDL****PG)
DC-	4	Black	AWG1 (KW11GY05PDL****HG)
			AWG3 (KW11GY05PDL****PG)
DC+	5	Red	AWG1 (KW11GY05PDL****HG)
			AWG3 (KW11GY05PDL****PG)
Pt1000 (DC-)	6	Brown	AWG18
	7	Green	AWG18
Pt1000 (DC+)	8	Pink	AWG18
	9	Orange	AWG18

Temperature Sensor Specifications

Sensor Type	Pt1000
Standards	DIN EN 60751
Measured Current	0.3mA
Temperature Range	-50℃~+130℃
Temperature Coefficient	3850ppm/K
Shutdown Temperature	90℃ （Equivalent to a Pt1000 value of 1347.04Ω）